



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,262	10/20/2003	Min-Chieh Chou	64,600-126	2887

570 7590 09/21/2005

AKIN GUMP STRAUSS HAUER & FELD L.L.P.
ONE COMMERCE SQUARE
2005 MARKET STREET, SUITE 2200
PHILADELPHIA, PA 19103

EXAMINER

NGUYEN, JIMMY

ART UNIT PAPER NUMBER

2829

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/689,262	Applicant(s) CHOU ET AL.	
	Examiner Jimmy Nguyen	Art Unit 2829	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 3 5, 7, 13, 18 - 25, 33, 34, is/are pending in the application.
- 4a) Of the above claim(s) 26 - 32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 3 5, 7, 13, 18 - 25, 33, 34, is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Argument

The examiner acknowledges that RCE filed 8/29/05.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1 - 3 5, 7, 13, 18 – 25, 33, 34, are rejected under 35 U.S.C. 102(e) as being anticipated by Zhou et al (US 2005/0035775).

As to claim 1, Zhou et al disclose (fig 3) a probe module comprising:

a probe base (200) having a plurality of conductive traces (63, 62, 52, 30);
a plurality of probe pins (30) attached to probe base (200), each of the probe pins (28,30) comprising an elongated body (middle section of 30), wherein at least part of the elongated body (middle section of 30) is bonded (when it comes into contact) to the plurality of conductive metal traces (63, 62, 52, 30) of the probe base (200); and

a circuit interconnect device (130) for connecting said plurality of probe pins (30) to an inspection apparatus (by connection 124).

As to claim 2, Zhou et al disclose (fig 3) the probe module of claim 1 wherein each of said plurality probe pins (30) further comprises a probe pin head extending from probe pin body (middle section of 30) and generally tapered probe pin tip (see fig 6) provided on said probe pin head.

As to claim 3, Zhou et al disclose (figs 3, 4) the probe module of claim 1 wherein said circuit interconnect device (100) comprises a plurality of conductive probe circuits (150) provided on said probe base (201) in electrical contact with said plurality of probe pins (230), respectively, and a flexible circuit board (220) provided in electrical contact with said plurality of conductive probe circuits (150, by 222).

As to claims 5, 13, 20, 24, Zhou et al disclose (figs 3, 4, 6) each of the plurality of probe pins (28,30) further comprises a probe pin head supported by the probe pin body (30) and generally semi-spherical probe pin tip or Tetrahedral provided on the probe pin head (see fig 6).

As to claims 7, 23, Zhou et al disclose (figs 3, 4, 6) a compression arm (141) attached to probe base (200) and engaging plurality of probe pins (30).

As to claim 18, Zhou et al disclose (figs 3, 4, 6) a probe pin for a probe module having a probe base comprising:

A probe pin body (middle section of probe pins 30) that is elongated and has at least a portion bonded to a conductive metal trace (63, 62, 52, 30) of the probe base (200);

A probe pin head extending from the probe pin body (middle section of 30); and

A probe pin tip (30) provided on the probe pin head (44).

As to claim 19, Zhou et al disclose (figs 3, 4, 6) the probe pin tip (30) has a generally polyhedral configuration.

As to claim 21, Zhou et al disclose (figs 3, 4, 6) a probe module comprising:

A probe base (201) having a plurality of conductive metal traces (222), the probe base (201) being defined by a first end (probe pins surface) and a second end (test head surface);

A plurality of probe pins (230) electrically connected to the conductive metal traces (222) of the first end of the probe base (201); and

A flexible circuit board (220) electrically connected to the conductive metal traces (222) of the second end of the probe base (201), thereby allowing the plurality of the probe pins (230) to be electrically connected to the flexible circuit board (220) via the plurality of conductive metal traces (222).

As to claim 22, Zhou et al disclose (figs 3, 4, 6) a probe module comprising:
The probe module wherein the flexible circuit board (220) couples the probe pins (230) to a testing unit via the conductive metal traces (222).

As to claim 25, Zhou et al disclose (figs 3, 4, 6) the probe pins include an elongated arm body (the middle section of 30) such that at least a part of the elongated arm body is attached with the probe base (200).

As to claim 33, Zhou et al disclose (figs 3, 4, 6) the probe module of claim 21 wherein the plurality of probe pins (230) are electrical connected to the conductive metal traces (222) of the first end of the probe base (201) by being bonded to the probe base, and the flexible circuit board (220) is electrically connected to the conductive metal traces (222) of the second end of the probe base by being bonded to the probe base.

As to claim 34, Zhou et al disclose (figs 3, 4, 6) the probe module of claim 7, further comprising at least one adjustment screw (205) provided on the probe base (201) that can be manipulated to adjust the compression arm against the plurality of probe pins to adjust the contact angle of the probe pins.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy Nguyen whose telephone number is (703) 306-5858. The examiner can normally be reached on M-F from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ramtiaz Nestor, can be reached on 571-272-2034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Application/Control Number: 10/689,262

Page 7

Art Unit: 2829

JN.

Sep 16, 2005


VINH NGUYEN
PRIMARY EXAMINER
A.U. 2829
09/17/05